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ABSTRACT

This paper details how classroom reading instruction can be studied by using microethnographic techniques, wherein classroom events are videotaped and then carefully analyzed to determine their social organizational features. A short introduction to the use of microethnographic methods is presented, followed by an analysis of a lesson taught by a white teacher to a group of black students, which offers a step-by-step illustration of how patterns of teacher-pupil interaction in a reading lesson can be identified. It is suggested that the analysis of participation structures used to instruct students provides a means of relating data on classroom lessons to achievement and offers particular promise for the study of instruction in classrooms with low achieving students. (RL)

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CENTER FOR THE STUDY OF READING

Technical Report No. 237

A MICROETHNOGRAPHIC APPROACH TO THE STUDY OF CLASSROOM READING INSTRUCTION: RATIONALE AND PROCEDURES

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A Microethnographic Approach to the Study of Classroom Reading Instruction: Rationale and Procedures

The purpose of this paper is to show how microethnographic methods can be applied to the study of classroom reading instruction. A short introduction to the use of microethnographic methods is presented, followed by a case example, an analysis of a lesson taught by a White teacher to a group of Black students. Through this case example we show step by step how patterns of teacher-pupil interaction in a lesson can be identified.

The focus of this paper is a narrow, restricted one. The intent is to provide a brief "how to" manual for the application of microethnography to the study of classroom reading lessons. Readers interested in broader theoretical and methodological issues, for example in comparisons of advantages and disadvantages in the use of microethnographic versus field-based correlational approaches, are referred to Au and Mason (1981) and Au (1980-b).

A Rationale for the Use of Microethnography

In the microethnographic study of classroom behavior, an event is videotaped and then carefully analyzed to determine its social organizational features. The analysis might consist of documenting and then predicting the nature and sequence of a set of remarks in a classroom, or determining whether students understand and follow the teacher's unstated rules for getting her attention or answering questions. The reason for carrying out such analyses is that learning in a typical elementary school classroom is deeply embedded in the flow of social interaction between

teacher and student. Understanding children's failure to learn requires an understanding of communication failure by one or both members in these interactions. Since conducting such fine-grained analyses is extremely time-consuming and painstaking, thought should be given to exactly what the unique contributions of tnis research approach are, and how the information obtained can be related to efforts to improve classroom reading instruction.

While microethnographic methods may eventually lead to findings that improve reading instruction in general, their application thus far has proved particularly beneficial to understanding the reading problems experienced by poor readers and children of culturally different backgrounds. It seems the nature of teacher-pupil interaction during reading lessons is an essential factor to consider when looking at certain students' failure to learn to read well.

This viewpoint is shared by others who have done close analyses of classroom lessons. McDermott (1978) offers the hypothesis that "our problem with deficient readers is not that they cannot develop various reading skills, but that they are not offered appropriate institutional circumstances for developing such skills" (p. 212). In a case study he found that the lowest reading group in a classroom received less of the teacher's attention during time allotted for their reading instruction, due to interruptions from students in other groups (McDermott, 1976). The work of Mohatt and Erickson (1981), Philips (1972), and Van Ness (1981) indicates that Native American teachers differ from Anglo teachers in the communication style they use with Native American students. Au and Mason (1981) showed that a culturally congruent communication style on the part of a

teacher can facilitate student learning. It is apparent, then, that some reading deficiencies are socially organized, in the sense that they may in part be created inadvertently through the actions of teacher and students alike. For this reason we must look much more closely at the classroom situations in which children receive reading instruction. As Cazden (in press) points out, much too little information about such settings is presently available. Microethnography thus requires a researcher to focus on classrooms, as opposed to conducting research in the laboratory (see Cole, Hood, & McDermott, Note 1, or McDermott, 1978, for further discussion of this point).

Until recently, the prevailing approach to the study of classroom learning events was the use of preplanned observational instruments for coding classroom interactions. While these have since been criticized for their inclusion of underspecified or subjective categories or for the presence of overlapping designations (see Dunkin & Biddle, 1974, or Good & Brophy, 1973, for a review), they have provided an important foundation for field-based correlational work (e.g., McDonald & Elias, 1975; Fisher, Filby, Marliave, Cahen, Dishaw, Moore, & Berliner, Note 2).

Our advocacy of microethnography is based on the assumption that while considerable progress in the identification of potent variables has been made through use of the field-based correlational approach, we still need to know how such variables are manifested and supported in the social organizational patterns of the classroom. As demonstrated by Au (1980-a), Gallimore & Au (1979), McDermott (1978), and Cole, Hood, and McDermott (Note 1), school learning (or not learning) takes place within a social setting. While correlational studies can identify many of the general

parameters of importance in that setting, they cannot specify its dynamics. In other words, we now have some rough definitions of those classroom variables that are related to academic achievement. What remains to be determined are the social organizational processes underlying these variables that support or are correlated with high levels of student achievement. It remains to be seen how situations with these positive features come about and how they are maintained through the actions of the teacher and children.

In a sense, the purpose of microethnographic analyses would be to "bring to life" some of the parameters identified in the field-based correlational studies. For example, in the conclusion to the comprehensive report on the Beginning Teacher Evaluation Study, Fisher, et al. (Note 2) state:

> One can construct from these results an image of the ideal class: a clear focus on cognitive learning; the students expect to work and are held responsible for doing so; the teacher cares about the students and wants to help them learn; teacher and students interact comfortably and frequently on work activities. In other words, a class where the teacher emphasizes the belief that the purpose of school is learning and fosters an environment where everyone, teacher and students, works together to reach that goal. (pp. 11-40 - 11-41)

We want to know how these parameters are interactionally maintained and developed in typical and in near-ideal classes. How do the teachers and children interact with one another to foster learning? According to Fisher, et al., "Most of these ideas are not new. None of these ideas are consistently put into practice" (p. 11-41). This further suggests that these highly favorable circumstances apparently do not come about very often in

schools as they are presently operated, so it is important to discover why they do not. Microethnography may also prove a useful means of addressing this problem.

The unit of analysis: The participation structure. One approach to a characterization of teacher-student interaction, espoused by some microethnographers and ethnographers, is to identify the participation structures (or contexts) in lessons. These structures describe how students can get a turn to speak, answer, or ask a question in a classroom group setting. According to Erickson and Shultz (1977), participation structures or contexts are "interactionally constituted environments that can change from moment to moment" (p. 6), and that are marked by unique sets of rules for speaking, listening, and turntaking. For example, one type of classroom participation structure requires that only one person, teacher or child, be allowed to speak at a time. All other participants must orient to the speaker, in order to show that they are paying attention. If one of the children wishes to speak, he must raise his hand and wait to be nominated by the teacher to take the next turn.

Participation structures are studied because their identification can help to explain why a lesson is not working (e.g., students might be trying to interact with a teacher but are using inappropriate procedures) or determine why a child is not engaged in a lesson (e.g., a child might not understand how to attract the teacher's attention, or a teacher might unwittingly be embarrassing the child). Participation structures can be thought to reflect one of the major aspects of the underlying organization of classroom lessons. Documentation of which participation structures

occur, of their duration, or of the smoothness of transitions can provide important information about the potential success of a lesson.

Ideally both qualitative and quantitative statements about the participation structures in a classroom event should be made. We can show, qualitatively, how each of the different kinds of participation structures is uniquely defined by the operation of specific rules for speaking, listening and turntaking. As for quantitative information, we can record the number of occurrences of the different types of structures and their distribution and duration across the lesson as a whole.

The analysis proposed here differs radically from that of fixed-category systems of coding behavior often used by researchers in the classroom (e.g., the Flanders Interaction Analysis Category System; Flanders, 1970). Categories of participation structures cannot be preestablished because one does not know for certain what participation structures have occurred in a classroom until the videotapes have been collected. Further, classifications for participation structures cannot be fixed because structures may vary in subtle but important ways in relation to one or another setting or to the function of a part of the lesson. Because of our interests in the lesson as an interactive phenomenon, it is unlikely that a fixed-category system would ever prove completely satisfactory. Although the methods of analysis described here are quite time-consuming, the identification of types of participation structures will move more quickly as researchers gain experience with the codification procedures and learn about the variety of structures generally found in classrooms.

Suggested Procedures Applied in a Case Study

The findings of field-based correlational studies suggest that young children, in particular, are likely to learn more in situations where they are closely supervised by a teacher than in situations where they are left largely to their own devices (e.g., Stallings, Cory, Fairweather & Needels, 1977). For this reason microanalyses focusing on instances of teacher-directed instruction are likely to be quite useful. Reading and arithmetic lessons are particularly appropriate, being universally taught and tightly constrained in methodology.

These lessons are readily identified in the majority of American classrooms, where it is found that the students are usually divided into small homogeneous groups for instruction. However, it may prove somewhat problematic in settings like that investigated by Mohatt and Erickson (1981), where the Odawa teacher's preference was to circulate around the room and provide "privatized" individual instruction. Nevertheless, most difficulties will be circumvented if the teacher is asked to give an indication of when she is "teaching reading" (or arithmetic). These occasions would become the targets of microethnographic analysis.

Participation Structures in the Classroom

A number of different investigators have described the participation structures (although they do not necessarily use this term) present in classrooms with students from a number of different backgrounds. Studies provide useful background reading for those interested in microethnographic analyses of classroom reading lessons. These studies have been conducted by ethnographers and sociolinguists, as well as by those working from constituent ethnographic and microethnographic perspectives. Philips (1972)

identifies four types of participant structures in classrooms on the Warm Springs Indian Reservation. Sinclair and Coulthard (1975) present a valuable analysis of the structure of discourse in exchanges between teachers and students. Mehan (1979) describes the social organization of lessons in an ethnically mixed classroom of young children. Differences in participation structures at home and at school are addressed by Shultz, Erickson, and Florio (in press). This last paper also provides a detailed discussion of the concept of the participation structure. Au (1980-a) identified nine different participation structures in a reading lesson taught by a Hawaiian teacher to a group of young Hawaiian children, and Mason and Au (in press) analyzed the participation structures in a lesson given to preschoolers. Carrasco, Acosta, and de la Torre-Spencer (Note 3) contrasted the participation structures in two lessons in a bilingual first-grade classroom.

We now turn to a description of the procedures that may be used to identify the participation structures in a reading lesson. Steps in the analysis will be traced in a case example. The general procedures followed are a subset of those recommended by Erickson and Shultz (1977), elaborated in some ways for the purposes of the research approach advocated here. We show how the participation structures in the sample reading lesson were identified and how data from this analysis (both qualitative and quantitative) may be summarized.

The Case Example

Background. The videotape was made in a combination third- and fourth-grade public school classroom. The school was located in a middle-income neighborhood of a midwestern university town. We arrived before

school began, in order to be able to set up the equipment and speak briefly with the teacher. At this time, we asked his advice on where the camera should be placed so as to be out of the way but in proper position to tape the reading instruction. We also gave him the wireless microphone that we used to obtain sound.

Approximately 25 children were present in class on the day of the taping, about 20 of them white and 5 black. The white children were from the neighborhood. The black children apparently lived in another area of the city but were bused to this school.

The teacher introduced the three of us who were doing the taping, and told the children that we were from the university and were interested in seeing how he taught them reading. The children were extremely well behaved and except for several glances in our direction did not react to us. We taped for one hour, beginning when the teacher indicated to us that the morning routines were finished and that he was about to begin reading instruction.

Preliminary cataloguing. On the first few viewings, the tape was simply reviewed to catalogue major events and gain an overall idea of its contents. The tape begins with the teacher going over the assignments that the various reading groups are supposed to complete during the morning. He next met with the top reading group to get them started on a new book. Then he met with the lowest reading group in the class, which contained four black students. Finally, the last part of the tape shows the teacher meeting with one of the middle reading groups.

Focusing on the reading lesson with the bottom group. Since we were interested in studying the teacher's patterns of interaction with poor readers, we focused on his lesson with the bottom group. This part of the

tape was transcribed. This work required two sessions, each about three hours long, of going through the lesson very slowly, listening carefully, particularly for the children's responses, which were recorded at a much lower volume than those of the teacher. A third session, also of about three hours, was used to check the transcription. Periodically, further errors and omissions are still detected, but these sessions yielded what Labov and Fanshel (1977) call a good working transcript.

Stages in the development of the analysis. We then reviewed the transcript and listed the major topical sequences in the lesson (see Table 1). A topical sequence is here defined as a set of related tasks

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Insert Table 1 about here.

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or questions, usually directed at a single instructional objective, or several similar objectives. The listing of the topical sequences is simply a further form of cataloguing, analogous to that done for the lesson as a whole. After a copy tape had been made with elapsed time recorded on it, we determined the approximate times at which the different sequences started and ended.

The next step was to view the tape to determine the different types of participation structures present. Basically, we looked for differences in the rules governing speaking, listening, and turntaking in the different parts of the lesson. (Having experience in viewing tapes or in observing extensively in classrooms is a great help in conducting this part of the analysis, because the work can proceed a bit more quickly if one has an idea of the kinds of things to look for.) With regard to speaking, we tried to determine who was doing it, the teacher or the children, in what

amounts, and of what types (e.g., lecturing, short answers to questions). We also determined who introduced the topics of discussion, the teacher or the children, and whether the topic was maintained or changed. Sometimes it is important to notice where the speaker orients and what listeners are doing. Listening may be demonstrated by looking at the speaker, although it is often found in lessons that children continue to look at the teacher, even when another child is speaking. Turntaking may also be managed in different ways. Usually there are times in lessons when the children must bid and then be nominated by the teacher before they can speak. Sometimes, there are contexts when they may speak without nomination.

Next, we looked at what Erickson calls rounds within the different contexts. These are usually repetitions of an interaction pattern, often associated with turns for recitation among the different students (e.g., teacher asks question, student answers, teacher evaluates answers). We also studied the way turns were allocated in various participation structures. Correction routines were of interest as another type of round. Repeatedly, we sought to find the patterns of behavior that made the event appear to operate smoothly. With competent teachers these patterns are often quite clearly marked, for example, by an "okay" followed by introductory remarks at the start of a new topical sequence. In the lesson examined the students seemed to have a good understanding of what was expected of them at almost all times.

We also watched for violations of rules, since these instances often help to verify the analysis. For example, a teacher may reprimand a child for not raising his hand before speaking. This sort of action indicates

that the group is following an implicit rule (Mehan, 1979). Whether this rule was explicitly stated at the beginning of the school year or established in the course of the interaction among the teacher and children, it might not have become evident without the occurrence of the violation.

Throughout this process, which involved repeated viewings of the tape, we were trying to identify the different kinds of participation structures in the lesson. To do so, we needed to remind ourselves that participation structures are not the same as topical sequences. In other words, we had to look beyond the topical sequences, or beneath them, to determine how they were carried out interactionally. The choice of topical sequences is consciously controlled by the teacher; for example, he may first conduct a drill in sight vocabulary and then switch to fill-in-the-blank exercises. Topical sequences are readily identified by most classroom observers. However, neither the teacher nor the casual observer is generally aware of the different kinds of participation structures in the lesson, since they involve forms of social and linguistic knowledge that are constantly but rarely consciously put to use.

Participation structures and topical sequences may be related in two different ways. In Relationship I, there are two different topical sequences that are interactionally the same type of participation structure, as depicted in the top of Figure 1. An actual example in the lesson

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Insert Figure 1 about here.

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analyzed here is seen in sequences 1 and 3, which are both instances of participation structure type 1; this is a case of Relationship I-1. In principle, Relationship I could also take form 2, in which two distinct

but adjacent topical sequences are both of the same participation structure type. However, no actual examples have been identified. In Relationship II, the same topical sequence incorporates more than one participation structure type, as seen also in Figure 3. The sole example in the lesson is sequence 6. Within this sequence there is a shift from participation structure type 2 to type 3. Shifts in participation structure may coincide with changes in topical sequence--this appears to be what usually happens--but shifts in structure may also take place within the bounds of a single topical sequence.

After we had formed preliminary hypotheses about the kinds of participation structures occurring in the lesson, we then tried to spell out exactly how speaking, listening, and turntaking were carried out differently in each. Then we returned to the tape to look at those segments that appeared to constitute instances of participation structure type 1, type 2, and so on. We refined the definitions of the different structures until we thought it possible to establish interobserver reliability.

The next step was to determine if the categories of structure established were exhaustive. If so, we would be able to classify all parts of the lesson as falling into one of the types defined. It will sometimes happen that there is only a single instance of a certain kind of participation structure, but most will have a number of exemplars.

We then made up two separate tables, one showing the lesson in its natural order, listing the approximate starting time of each participation structure and the shift to that following it (see Table 2). We also listed separately the instances of the different kinds of structure (see Table 3).

Insert Tables 2 and 3 about here.

We then checked our preliminary analysis in two separate ways. First, we watched the tape from start to finish to verify the results in the first table. Second, we skipped around on the tape so that we could watch in succession all the instances of a specific type of participation structure. This led to further refinements in our definitions of ideas about the basic characteristics of each type of structure. As a last step, the distribution of the different structures across the entire lesson was depicted graphically, as shown in Figure 2. This form of representation shows patterns in the relationships among the types of structure, variations in their duration, and the relative frequency of their occurrence in different parts of the lesson (i.e., beginning, middle, or end).

Insert Figure 2 about here.

The Types of Participation Structures

In the sample lesson five different kinds of participation structures were identified: (a) individual recitation--student centered, (b) individual recitation--item centered, (c) free responding, (d) teacher directions, and (e) choral responding. The statements we make about each type of structure will be both descriptive and criterial, i.e., they will be generalizations about the nature of the activities as well as those features that distinguish one type of structure from another. Supporting narratives are provided in the appendices. The case material is also used as the basis for discussing some of the conceptual problems that arise in this sort of work.

Type 1: Individual recitation--student centered. This context occurred on three separate occasions, coinciding with topical sequences

1, 3, and 5. Basically, each child is given but a single turn to recite during a given topical sequence, unless he has performed poorly in reading aloud. There appears to be a well-understood set of rules for turntaking operating in this structure. A child may bid for a turn even before the teacher has introduced the task or has finished commenting on the previous child's performance. Not all of the children are expected to bid for every turn, since if they have already received one, they will not be nominated again anyway. It is appropriate, however, for all those still waiting for a turn to bid. Bidding may be verbal, nonverbal, or a combination of both. In the three examples of this first type of participation structure, the teacher always called on Bernie, Calvin, and Alan, in that order, while Denise twice went last and once first (the seating of the teacher and children is shown in Figure 3). In this structure it may be that there are only two orders in which turns are assigned: (a) Bernie, Calvin, Alan, and Denise; or (b) Denise, Bernie, Calvin, and Alan. If this is true, then the children's bidding functions less to determine who will get the next turn than to demonstrate their interest and attentiveness to the teacher (see Appendix A for a supporting narrative).

Insert Figure 3 about here.

Speaking in this structure is also highly patterned. The teacher basically introduces the task, chooses the child who will read aloud, engages in correction routines if necessary, and comments on the child's performance. He may say a few words of encouragement if need be. At any time he may also stop to scold children, within the group or outside of it (there is one instance of each). The responses of the students are structured by the printed materials; they read aloud cards held in the teacher's

hands, words on cards placed in the pocket chart, and sentences on worksheets. Speaking is restricted to the child who was originally nominated for that item, unless he/she stumbles on a word. At this point other children may raise their hands and will sometimes be called on by the teacher to supply the correct word. (An interesting exception to these rules in sequence 5 is discussed shortly.)

While another child reads, the children not reading are supposed to be following with their eyes focused on the relevant materials. This rule for demonstrating listening or attentiveness is made explicit twice, through violations, once during sequence 1 and again during sequence 5. Both times Bernie looked away from the materials. The first time, the teacher said, "Bernie, where are your eyes supposed to be while we're doing this?" Immediately, Bernie turned from his right to look at the word cards the teacher was holding up for Alan to read. In sequence 5, again during Alan's turn, the teacher noticed that Bernie was not following along on the mimeographed worksheet in front of him. The teacher pointed to the proper place on Bernie's sheet without saying a word. Bernie then put his own finger on the sheet and pointed at the words in an exaggerated fashion as Alan read them.

The teacher stated the rule for listening in sequence 1, after Bernie had taken his turn: "Okay, now, since we have only time for one more before we go to these, let's have everyone watch and listen very carefully." Again, at the beginning of sequence 5, he says, "What'll you all be doing while Denise reads?" One of the children answers, "Watching," to which the teacher adds, "And listening."

A small conspiracy: Variability within a structure type. Sequence 5 is particularly interesting because there is a change in the rules governing the children's speaking, as applied to situations involving the telling of answers to other children. In all of the other sequences in which reading aloud is the central task, when a mistake has been made or the reader does not know the word, the other children raise their hands to signal to the teacher that they know the answer. They are not allowed simply to tell the other child the correct response. The teacher may decide to go through a correction routine, trying to help the child to induce the correct word, without actually telling it to him. In these cases he provides a series of clues until the child says the correct answer. In other cases he may call on one of the children who has raised his hand or said, "I know" to supply the response. In sequence 5 there is a definite shift away from this pattern. During each child's turn (except that of Bernie, who does not need any help), some assistance is given by the other children to the child reading aloud, with no objections raised by the teacher. Handraising occurs only in connection with bidding for a turn, and never within the turn of another child. The teacher himself seems to encourage this pattern of behavior by not following full correction routines. (For more information on the small conspiracy, see Appendix B).

In the small conspiracy the teacher and children cooperate to make it easier for the child called upon to recite by telling him the words he is unable to read. Their behavior differs markedly from that shown in other examples of the same type of participation structure. Have the rules for behavior changed so much that this should be considered another type of structure altogether?

In this case the basic rules for speaking, listening, and turntaking remained the same. It was only the rules for speaking during the turn of another student that were changed. This shift indicates that structure types, as behavioral phenomena, are not static but may exhibit some variability while still retaining their essential character. These variations may be systematic in a way not explored here; for example, small conspiracies may routinely occur in the later part of reading lessons with this teacher and these children, but not in the earlier part. The point to be emphasized is that we should expect there will be some differences in examples of structure types. It may be useful to think of a structure type as having both intensional and extensional meanings. By intensional meaning we denote its essential character and basic defining features, while by extensional meaning we refer to examples of it that occur across time.

Type 2: Individual recitation--item centered. In this type of participation structure, turns are allotted according to the number of items, so that each child receives at least one turn. Some of the rules for turntaking are the same as in structure type 1, in that a child who has already received will not get another turn until all of the other children have had one. Another rule for turntaking appears to be that no child may have two turns in a row, as is made evident in sequence 8, when Bernie is denied a turn because "You just had one." The complete analysis of turntaking in this structure, which is quite complex but entirely orderly, is presented in Appendix C. Rules for speaking and listening appear to be the same as in structure type 1.

Degrees of similarity among structure types. A consideration of structure type 2 leads to a basic conceptual problem in the differentiation

of types of participation structure. Should structure type 2 be considered as a separate category of structure, or as just a variation or subtype of structure type 1, since it appears to differ only in rules for turntaking? A similarity scale can be constructed based on degrees of differences among structures, in keeping with the three sets of behaviors (speaking, listening, and turntaking), as shown in Figure 4. Structure type B is at the first degree of similarity to type A because it has the same basic rules for two of the three behaviors, S and L (this is the relationship hypothesized between structure types 1 and 2). On the other hand, structure type C is at the second degree of similarity to type A, being judged as more different because it incorporates the same basic rules for only one of the three behaviors (L). The operation of different rules for <u>any one</u> of the three types of target behaviors should probably be taken as sufficient basis for establishing a separate type of participation structure, at least in the initial stages of analysis. It would be easy to collapse categories across similar structure types (at either the first or second degrees of similarity) later in the data analysis, if it appears desirable to do so.

Insert Figure 4 about here.

<u>Type 3: Free responding</u>. After the teacher has introduced the task, the children who know the answer (or think they know it) may respond without bidding. A child may respond as often as he wants, and individual turns are not allotted. The only two exceptions occur in sequence 2, when it appears that certain children have special knowledge that the other children probably do not. In the first instance, Bernie is the only

student who remembers the term "compound." The teacher then asks him to say what a compound word is. Later in the same sequence Alan asks to see the word on the card the teacher is about to show the group. Thinking that he has recognized the word, the teacher calls on him. Alan is indeed able to identify the word as "store."

The teacher responds to the answers that are called out by the children, providing further clues or the answer itself. The children must face the teacher and direct all their answers to him. There were three instances of structure type 3 in the lesson (sequence 2, the first part of sequence 6, and sequence 9). In the first case the teacher was presenting the new words for the day, and the children were encouraged to guess what they were. The teacher sometimes provided hints as to the words' identities. In this case, the teacher did not generally expect that the children would already know the words by sight, so he allowed members of the group to respond when they could. Taking only those instances when it was possible to identify the speaker, it was found that Bernie answered three times, and all of the other children twice each. There was an even rate of response among the children, probably a prerequisite for maintaining this kind of context.

Sequence 6 is particularly interesting because the first part of it is an example of structure type 3, while the second part of it is an example of type 2. The teacher has been allowing the children to respond freely to his questions about the clues in the sentence that indicate which of the new words belong in the blank. Bernie especially and Denise to a certain degree are actively suggesting answers, while Alan and Calvin are responding less often. The disadvantage to organizing an activity in a

manner that depends on free responding is that a child who is uncertain may sit there passively and not learn much. Evidently, this is what the teacher decides may be happening to Alan and Calvin, for he suddenly shifts the structure after introducing the next item by saying, "Let me hear Calvin tell me," at an unusually loud volume, overriding the voices of the children. At the point when the shift is made, Bernie has responded 6 times; Denise, 4; Calvin, 3 (but once he repeated an answer given by Bernie); and Alan, 1. Alan's single response was to a particularly difficult item, however. For some of the responses given it was not possible to identify the speaker, so these figures are not completely accurate. They do provide an indication that the rate of responding among the children was not equal and therefore inappropriate in terms of the apparent rules for this type of participation structure.

This shift of structure is the only one to take place within a topical sequence. It shows that there are implicit rules for the free responding structure. Although turntaking is voluntary, the rule for speaking is simply that a child should speak whenever he knows the answer. However, if a child does not understand the task, he will be unable to participate often enough to keep pace with the others. Thus, this type of structure can only be sustained at length when all of the children demonstrate an equivalent competence in the skills involved. Once the teacher observed that these conditions were not being met, he decided that the participation structure needed to be changed.

Type 4: Teacher directions. There is only one instance of structure type 4: sequence 10, the last in the lesson. With but one example we cannot be certain if this structure can occur only at the end of lessons.

The teacher concentrates on providing detailed directions about seatwork assignments. The children probably will not need to speak, even to ask questions, since these directions are for pages that the teacher has judged they can work on independently. Individual children speak only twice. Calvin comments that he understands the directions, although he had made a mistake on his paper, which he immediately erases. Then Bernie says, "Read this and--," being interrupted by the teacher, who then reiterates and clarifies the directions for that assignment. The notion that this type of structure typically closes the lesson is supported by the fact that the children suddenly stand up and begin to leave the reading tables even before the teacher seems to be finished with everything he has to say. Only Denise remains seated (the first to have arrived and the last to leave). Yet this abrupt leaving behavior seems perfectly acceptable to the teacher.

Type 5: Choral responding. There is also a single instance of this type of structure, sequence 7. The teacher states to the children that they will go over the words once more, but "I'm going to have you go over them in a chorus." Before he says "in a chorus" Denise has raised her hand to bid for a turn, but promptly puts her hand down when she hears the last part of his statement. The teacher then turns to his left to the chart stand, points at each word, says it, waits for the children to repeat it in a chorus, then goes on to the next word, and so on through the last word. The function of this structure is probably to provide an additional form of review. It seems to supplement individual reading of the new words. The children all participate and follow the words on the chart.

Quantitative Analysis of Structure Types

Once the structure types have been identified, some simple descriptive statistics can be obtained, as shown in Table 4. After recording the length of occurrence of each type of participation structure, the total amount of time it occupies can be determined, as well as the percentage of total time for each type. As is by now evident, this simple quantitative analysis is helpful in arriving at a better understanding of the social organization of lessons. In the lesson analyzed here, it can be seen that the amount of time spent in structure type 1 is by far the greatest, 51.30% of the entire lesson, while that spent in type 5 is negligible, 0.57%. It is important to characterize participation structures both qualitatively and quantitatively to avoid being misled about the relative importance of various structure types.

Insert Table 4 about here.

Overview of Procedures Illustrated in the Case Example

In an actual study, unlike in the case example presented to illustrate the analytic techniques, an important preliminary step would be participant observation and other means of gathering background information about the setting and subjects. The decision about what is to be videotaped and analyzed would grow from these observations, as well as from the original purposes set for the research project. Wider background information is also necessary for an appropriate interpretation of the results of a microethnographic analysis; issues surrounding such interpretation are not discussed in this paper.

An important first step, after the researcher has gained some familiarity with the setting and subjects, is to determine the classroom event or activity to be videotaped. We have suggested that a great deal can be learned about reading from the analysis of small group lessons. The second step in the microethnographic analysis is to list the topical sequences or instructional activities in the videotaped lesson. The starting time of each sequence is noted to establish convenient reference points.

The full transcription of the tape is actually an optional third step. The decision to undertake this time-consuming task depends largely on the level and precision of the information sought. Narrative descriptions of events on the videotape, of both verbal and nonverbal behavior (such as those presented in the appendices), may be substituted for transcription.

The kind of participation structure analysis recommended here as a fourth stage in microethnographic analysis requires repeated viewing of the videotape. Preliminary descriptions of the categories of participation structures are revised until the descriptions are sufficiently complete and accurate that the structure types can be reliably distinguished from one another. Also, the process of category refinement must continue until the set of categories is exhaustive, i.e., until each segment of the tape can be classified. These are steps in the qualitative side of participation structure analysis, which may then be followed by quantitative procedures. The starting and ending times of exemplars of each different category of participation structure can be recorded. Total lesson time taken by different structures, their distribution and duration, and other

types of quantitative information can also be obtained. Graphing of the participation structures in the lesson is often helpful. We have especially emphasized the importance of combining qualitative and quantitative information.

Conclusion

There are, of course, many different ways of analyzing classroom learning events. We have suggested that microethnography, as a methodology, can lead to greater specification of the variables found in other approaches, such as the field-based correlational approach, to be related to student learning. In particular, microethnography can help us understand the interactional dynamics of lessons, the ongoing processes of instruction in actual classroom settings contributing to, or detracting from, children's day-to-day development of skills in important academic areas, such as reading and mathematics. Particularly in the case of low-achieving students, it is important to find out why instruction does not often prove to be highly effective. If we can learn more about the interactional characteristics of natural classroom settings in which instruction is provided to these children, perhaps we will have fresh insights into ways for improving their chances to become competent readers.

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Appendix A

Narrative on Turn-Taking in Structure Type 1, Sequence 1

At the very beginning of the lesson, before the teacher has even introduced the first task, one child, Bernie, asks twice if he can go first. Although the teacher appears to be ignoring these requests, he does nominate Bernie to take the first turn at reading the word cards, without inviting bidding by the other children. Apparently, the reading of the word cards is a well-established routine. When Bernie's turn is over, the teacher says, "our [repeating the last word]. Okay, nice job, Bernie." As the teacher says "Bernie," Calvin bids for the next turn, asking, "Can I do it now?" He is nominated by the teacher.

The second set of words is to be read by the remaining two children, Alan and Denise. Since neither of them volunteers immediately, the teacher asks, "Okay, Alan or Denise, who'd like to be first?" Alan raises his hand, while Denise does not, although she is looking at the teacher and sitting up straight. Alan is chosen to take the next turn. When Alan is finished, the teacher turns to Denise and says, "Ready, Denise?" None of the boys attempts to bid for a turn.

At the beginning of sequence 3, the teacher announces the task: "All right, who can read the words off the chart here quickly?" As he says "read," Bernie starts to raise his hand, so that his arm is fully extended in the air by the time the teachers says "off." He is again nominated for the first turn, without the other children having had a chance to bid.

The tape does not provide a good view of the children at the end of Bernie's turn. It can be seen, however, that both Alan and Denise begin to raise their hands, although Calvin is nominated by the teacher before

they actually get their hands up; perhaps he had raised his hand earlier. When Calvin has read all of the words on the chart the teacher immediately turns to his right toward Alan and asks him, "You read?" Alan received the next turn, although Denise raised her hand before he did. Alan appears merely to wave his pencil in the air after the teacher is already facing him. When Alan's turn is over, Denise immediately raises her hand, the teacher turns and points at her, says, "Okay," and she begins reading the words.

At the beginning of sequence 5, the teacher says, "All right, who can read these seven sentences lickety split without halting, without missing a word?" Both Bernie and Denise raise their hands and say, "Me." The teacher's next comment, however, seems to be an indirect reprimand of Alan and Calvin, who have not volunteered: "I see two volunteers." This statement may be glossed, "What about the other two of you? You should show me that you want to read, too." Alan and Calvin do put up their hands, although the teacher nominates Denise anyway.

When Denise has finished, the teacher repeats the last sentence she read, and says, "That was good." As he begins repeating this sentence, all three boys begin to raise their hands. He nominates Bernie. Bernie reads, and as soon as he is finished, both Alan and Calvin raise their hands. The teacher chooses Calvin. When Calvin is finished, the teacher turns to Alan and says, "Okay, one more time." Alan then begins to read.

Appendix B

Narrative on Small Conspiracy Turn-Taking, Structure Type 1, Sequence 5

The first turn is assigned to Denise. When she reads "don't" for didn't the teacher corrects her directly: "Not don't, she didn't." On the next item, which should be number 4, Denise loses her place and begins to reread number 3. The teacher corrects her: "Number 4. You read that one already." Denise, probably shaken by her mistake, begins to read number 4, but does so incorrectly. The first two words are "we would," but she reads, "I sss--." The teacher interrupts her and says, "Look up here," turning to the chalkboard. Bernie, or perhaps Calvin, says, "We," identifying the first word for Denise. The teacher meanwhile is trying to help her to identify the second word, would. Both the words could and would are already written on the board. He points to one, then the other, cueing Denise: "Could--." She is now back on track and begins reading correctly, "We would like to . . ." She then says "ride" for read. The teacher says, "Mm-mm no," and begins to turn toward the chalkboard again. Just as the teacher turns away, Calvin turns quickly toward Denise. He may be telling her in a low voice that the word is read. The teacher does not notice, since he was looking away to print read on the chalkboard. He continues, "This one. Have you forgotten?" holding the piece of chalk at the end of the word. Denise continues correctly, "Read a storybook." She then reads the entire next sentence correctly. On the following sentence she stumbles on let's, omitting the final s. The teacher says, "Sss," and she corrects herself. She then says "fast" when the word is faster, and the teacher quickly adds "-ster" for her. When she reads "the" for a in the sentence "I'm in a hurry," the teacher cues her by repeating

the beginning of the sentence: "I'm in . . ." She then says, "in a hurry." Denise's next error is to read we were as "we are." The teacher says, "Not we are," and Calvin says quietly, "Were." Denise continues reading correctly, "We were working," then pauses. Calvin prompts her, "Hard." Denise repeats, "Hard," and continues, "We are--were very busy."

The third turn is assigned to Calvin. He makes no mistakes in reading the first five sentences, but in the sixth sentence hesitates briefly before reading "hard." While he hesitates Denise's head turns quickly toward him, and she may have given him the answer. He then says "hard" and continues, "We were" but appears not to know the next word. Denise says "very," he repeats it, then pauses on the following word, which she again supplies: "Busy." He then says "busy." The teacher appears not to notice that Denise has helped him, although he is surely able to hear her. He simply says, "Okay, we were very busy," then turns to give Alan the last turn.

Alan, too, reads the first five sentences correctly. Then he says "Let's go fast I--." The teacher cues him, "Let's go fast . . ." and Alan says "-er." The teacher says, "-ter" and leans toward Alan to point to the word faster." Alan continues, "I'm in a hurry." On the next sentence Alan hesitates on working. Bernie cues him: "Work" and both boys say "working" at the same time. Alan then pauses on busy, and Denise tells him the answer softly, "Busy." The teacher again acts as if he has not heard Denise say anything. He points to the word on the chart and says, "This one. We were very . . ." Alan then replies, "Busy," and the teacher repeats, "Busy."

Appendix C

Narrative on Turn-Taking in Structure Type 2, Sequences 4 and 10

In sequence 4A the teacher states that the task is to "figure out which one of these words goes in these --ah sentences." He then asks the children "Who'd like number one?" opening the floor for bidding. Only Bernie and Denise raise their hands. This is interesting in view of the suggestion made with regard to turntaking in structure type 1 that Bernie and Denise are the only children who will be called on to take the first turn. In this case the teacher selects Denise. In the next turn there is no bidding and Calvin is called upon to read. At this point Bernie has left the table, apparently to sharpen his pencil. Bernie's turn follows Calvin's. As soon as Bernie's turn ends, Denise asks the teacher, "May I take another one?" He replies, "Kay, number 5, Denise." Alan has not received a turn; although up until this point the teacher had been going around the table clockwise, he is skipped over. Item number 4, which he would have read, is also skipped, since Denise reads number 5, as she was instructed to do. Alan apprises the teacher and the other children of this omission, by saying "Number 4" as Denise begins to read number 5. Denise objects "He said number 5." Then the teacher realizes what has happened. "Oh, did we skip number 4?" He then asks Alan to read item number 4 "since you notice."

In this episode the teacher probably had mentally assigned number 4 to Alan and number 5 to Denise before Denise bid for a second turn. Her bidding before Alan had taken his turn upset the pre-arranged order, which is restored when Alan points out the error. Denise's turn with item number 5 resumes after Alan does number 4. Bernie then bids for a turn and

receives one, while Calvin bids for and is nominated to take the last item. The order of turns, then, was as follows: Denise, Calvin, Bernie, Denise--interrupted, Alan, Denise--resumed, Bernie, and Calvin.

In the last portion of sequence 6, there is a shift from structure type 3 to structure type 2. The teacher nominates Calvin for a turn, for reasons to be suggested shortly. Calvin's turn is for the second-to-the-last item. All three of the other children bid to take the last item, but the teacher selects Alan.

In sequence 10, and the example of structure type 2, it appears that only Bernie and Denise bid for the first turn, again supporting the notion that they are the only students who will be nominated to take the first item. Denise is chosen to recite, after which all three boys bid for the second turn. Calvin is nominated. At the end of Calvin's turn, the teacher announces, "Number 3." Bernie asks, "What are you doing?" He may be wondering why the teacher has already started on the next item while he is still writing the answer for number 2. The teacher tells him, "Hurry up." Alan is the only child to raise his hand and is called on. At the end of Alan's turn, Bernie asks, "Can I read?" and is then nominated. Following Bernie's turn, the teacher asks the group, "All right, who would like the last one?" Bernie's hand is the first to be raised, but the teacher says to him, "You just had one," and calls on Alan instead. The teacher's head does not turn toward his right and he does not appear to look at either Denise or Calvin but turns immediately to the left to face Alan. In this sequence the order of turns was: Denise, Calvin, Alan, Bernie, and Alan.

Turntaking in structure type 2 is much more complex than in type 1, but it, too, can be seen to be rule-governed. In two instances, sequences 4A-B and 8, Denise is nominated to take the first turn, while in the part of sequence 6 after the shift, Calvin is selected. He might well not have been chosen if the activity had just been introduced; there are not enough occurrences of this context type to determine if this is in fact the case. Bernie and Denise were never chosen for the last item. It may be that they normally are chosen to begin the activity, as in structure type 1, while Alan and Calvin finish it.

Figure 5 shows the pattern of turntaking in all three instances of structure type 2. It can be seen that the second child chosen is seated to the right of the first. The teacher then alternates, switching from the right following odd turns (third, fifth, and seventh), to the left following even turns (fourth and sixth).

Insert Figure 5 about here.

Table 1

Topical Sequences in the Lesson

Sequence Number	Description of Sequence
1	Reading of word stacks
2	Introduction to and writing down of new words
3	Reading new words aloud
4A	Figuring out which words go in the sentences
X	Interruption
4B	Continuation of 4A
5	Reading sentences aloud
6	Identifying clues to correct words
7	Reading words in chorus
8	Telling whether action involves real or make-believe events
9	Telling whether action involves real or story-book animals
10	Finding the sentence that says the same thing; other directions for seatwork

Table 2

Participation Structures in the Lesson (Natural Order)

Type of Structure	Starting Time	Ending Time	Sequence Number
1	0:00	12:55	1
3	12:55	16:42	2
1	16:42	18:08	3
2	18:08	22:00	4A
Xa	22:00	22:23	-
2	22:23	22:57	4B
1	22:57	28:02	5
2	28:02	29:49	6
3	29:49	30:50	6
5	30:50	31:03	7
2	31:03	34:44	8
3	34:44	36:33	9
4	36:33	37:53	10

[a]Interruption

Table 3

Instances and Number of the Types of Participation Structures

Type of Structure	Topical Sequence Location	Number of Occurrances
1	1, 3, 5	3
2	4A-B, 6 (2nd part), 8	3
3	2, 6 (1st part), 9	3
4	10	1
5	7	1

Table 4

Distribution of Time Among the Participation Structures

Sequence Number	Type of Structure	Seconds
1	1	775
2	3	227
3	1	86
4	2	266
5	1	305
6-1	2	107
6-2	3	61
7	5	13
8	2	221
9	3	109
10	4	81

Type of Structure	Total Time	Percent of Lesson
1	19 min. 26 sec.	51.30
2	9 min. 54 sec.	26.13
3	6 min. 37 sec.	17.47
4	1 min. 20 sec.	3.52
5	13 sec.	.57

Figure Captions

Figure 1. Relationships between participation structures and instructional activities.

Figure 2. Distribution of participation structures over time.

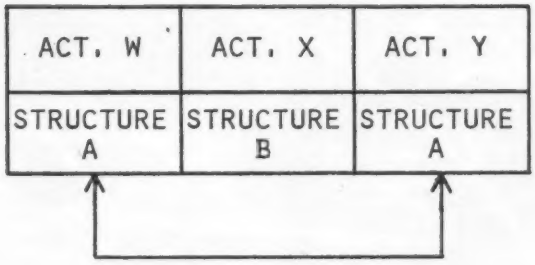
Figure 3. Seating of teacher and children.

Figure 4. Degrees of similarity among types of participation structure.

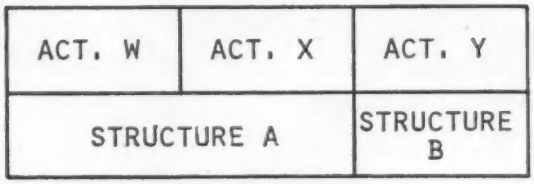
Figure 5. Pattern of turntaking for activities 4, 6, and 8.

RELATIONSHIP I — DIFFERENT ACTIVITIES,
SAME TYPES OF STRUCTURE

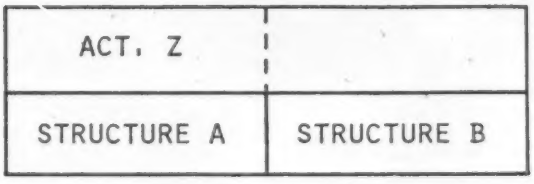
I-1

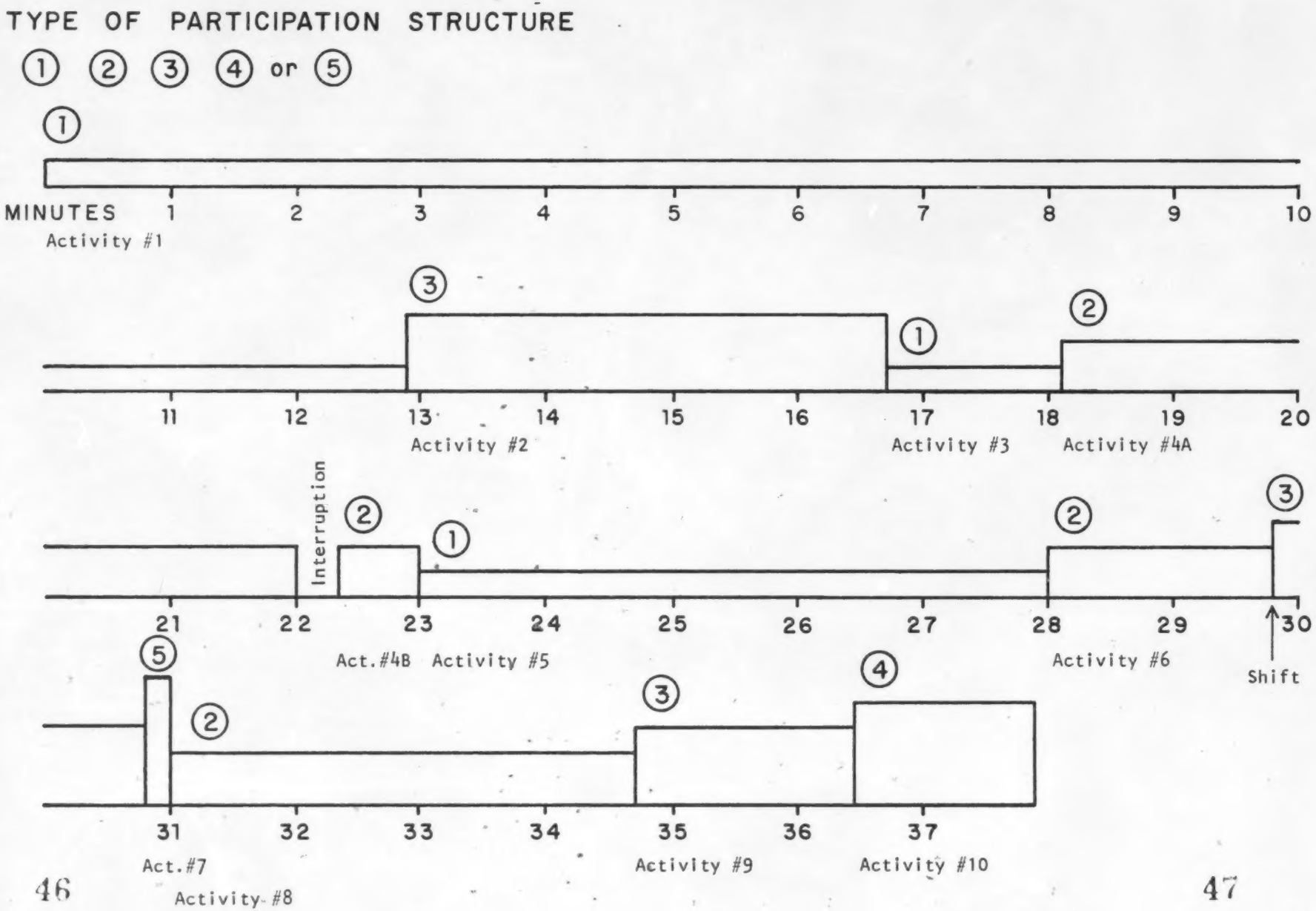


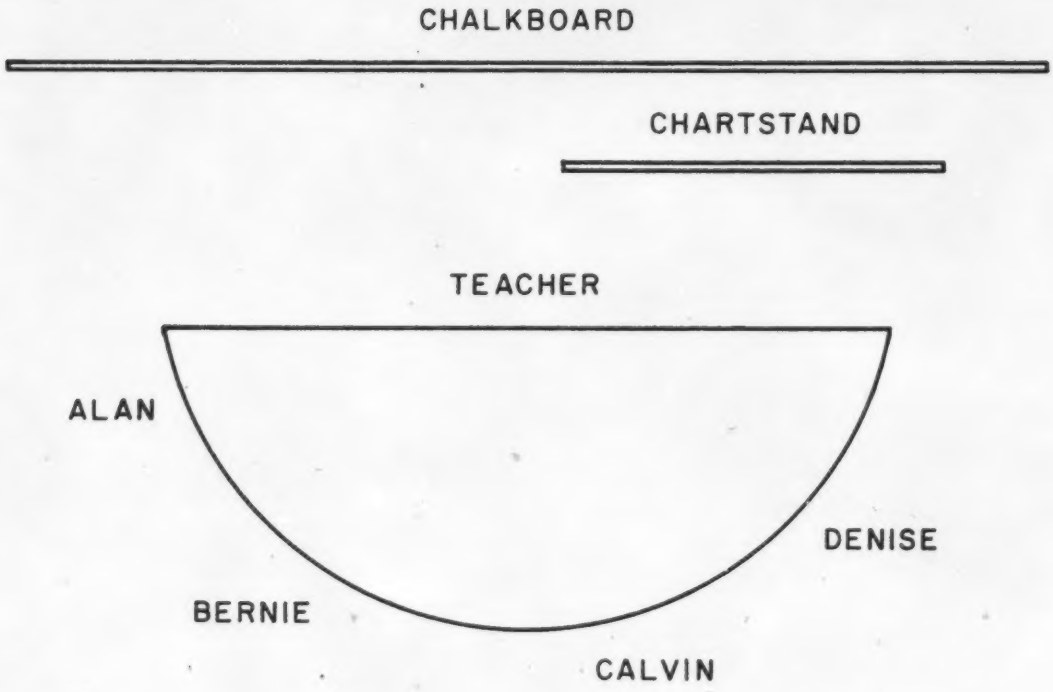
I-2

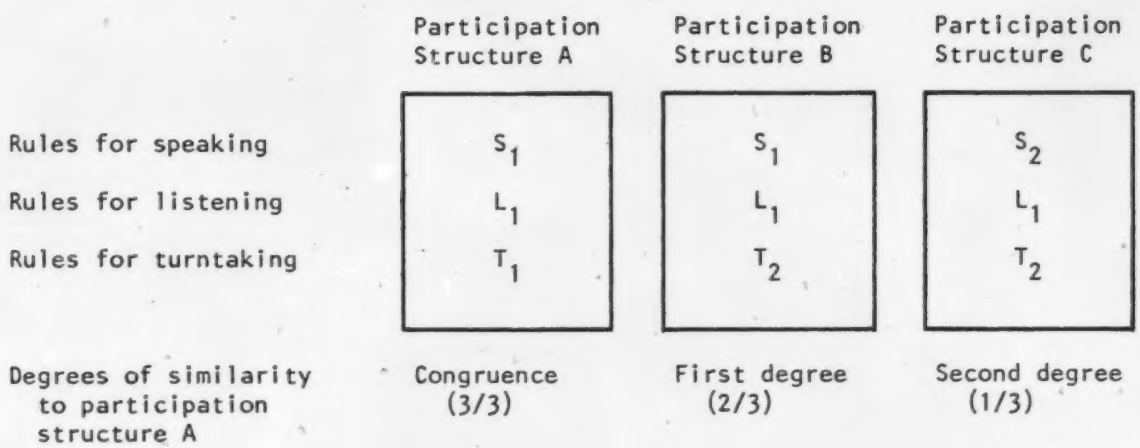


RELATIONSHIP II — SAME ACTIVITY,
DIFFERENT TYPES OF STRUCTURE




TYPE OF PARTICIPATION STRUCTURE
① ② ③ ④ or ⑤
①
MINUTES 1 2 3 4 5 6 7 8 9 10
Activity #1
③
①
②
11 12 13 14 15 16 17 18 19 20
Activity #2
Activity #3
Activity #4A
Interruption
②
①
②
③
21 22 23 24 25 26 27 28 29 30
Act.#4B
Activity #5
Activity #6
Shift
⑤
②
③
④
31 32 33 34 35 36 37
Act.#7
Activity #8
Activity #9
Activity #10

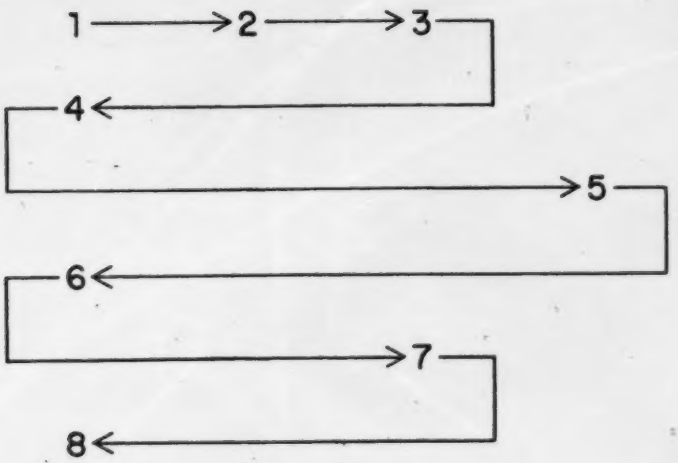

CHALKBOARD
CHARTSTAND
TEACHER
ALAN
DENISE
BERNIE
CALVIN
OTHER STUDENTS


Participation Structure A
Participation Structure B
Participation Structure C
Rules for speaking
Rules for listening
Rules for turntaking
S_1
L_1
T_1
S_1
L_1
T_2
S_2
L_1
T_2
Degrees of similarity to participation structure A
Congruence (3/3)
First degree (2/3)
Second degree (1/3)

STUDENTS AT TABLE

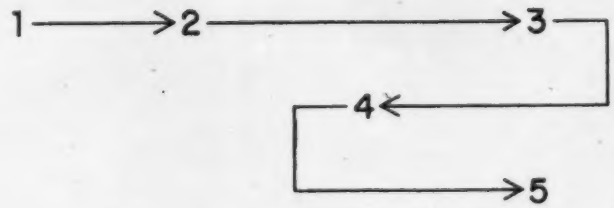
D C B A

ACT. #4



ACT. #6 (2nd PART)

ACT. #8



TO RIGHT	TO LEFT
1 → 2	
2 → 3	
	3 → 4
4 → 5	
	5 → 6
6 → 7	
	7 → 8